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**Title: JP59115576A2: WIRING METHOD FOR SOLAR BATTERY**

**Derwent Title:** Circuit connection of solar cell elements - arranging solar cell elements, placing metal conductors on both surfaces of elements, and heating conductors NoAbstract Dwg 3,5/6 [\[Derwent Record\]](#)

**Country:** JP Japan

**Kind:** A

**Inventor:** SHIBATA AKIRA;  
NAGAHARA YOSHIYUKI;  
NUNOI TORU;

**Assignee:** SHARP CORP  
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**Published / Filed:** 1984-07-04 / 1982-12-22

**Application Number:** JP1982000234502

**IPC Code:** H01L 31/04:

**Priority Number:** 1982-12-22 JP1982000234502

**Abstract:** PURPOSE: To simultaneously execute an electrode attaching and wirings by placing a metal gauze on the surface of adjacent solar battery cell or on the front and back surfaces, and connecting by heating and pressurizing the gauze to the front and back surfaces of the respective cells.

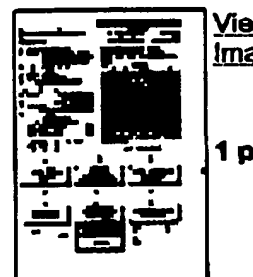
CONSTITUTION: Solar battery cells 1a-1c are placed on a heater base 6 by arranging metal gauzes 5a-5d on the front and back surfaces, an upper heater base 7 is lowered, pressurized, the gauzes 5a, 5c are connected by ohmic contact by heating and pressurizing for the prescribed period of time, the gauzes are sequentially connected to the cells 1b, 1c, and the cells are connected in series. Parallel connection can also be performed by the disposition of the gauzes. For example, the metal gauzes 5 of aluminum are used to connect N+ type/P type Si elements, it is sufficient to heat and pressurize at 300°C by approx. 300kg/cm<sup>2</sup>. According to this configuration, since the gauzes are employed, the decision of mounting position is not necessary, without soldering, and the manufacturing time can be remarkably shortened.

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**Family:** None

**Forward References:** [Go to Result Set: Forward references \(6\)](#)

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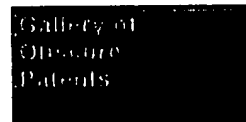
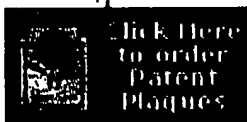


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PDF	Patent	Pub. Date	Inventor	Assignee	Title
	<a href="#">US6188013</a>	2001-02-13	Inaba; Atsushi	Honda Giken Kogyo Kabushiki Kaisha	<a href="#">Solar cell</a>
	<a href="#">US6020556</a>	2000-02-01	Inaba; Atsushi	Honda Giken Kogyo Kabushiki Kaisha	<a href="#">Solar cell</a>
	<a href="#">US5474621</a>	1995-12-12	Barnard; Timothy J.	Energy Conversion Devices, Inc.	<a href="#">Current collection system for photovoltaic cells</a>
	<a href="#">US5158618</a>	1992-10-27	Rubin; Leoind B.	BioPhotonics, Inc.	<a href="#">Photovoltaic cells for converting light energy to electric energy and photoelectric battery</a>
	<a href="#">US4695674</a>	1987-09-22	Bar-on; Ari	The Standard Oil Company	<a href="#">Preformed, thin-film front contact current collector grid for photovoltaic cells</a>
	<a href="#">US4652693</a>	1987-03-24	Bar-On; Ari	The Standard Oil Company	<a href="#">Reformed front contact current collector grid and cell interconnect for a photovoltaic cell module</a>

Other Abstract Info:

None



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(18)

JAPANESE PATENT OFFICE

## PATENT ABSTRACTS OF JAPAN

(11) Publication number: 01206671 A

(43) Date of publication of application: 18.08.1989

(51) Int. Cl. H01L 31/04

(21) Application number: 53032325

(22) Date of filing: 15.02.1988

(71) Applicant: SHARP CORP

(72) Inventor: NUNO TORU

(54) SOLAR CELL

(57) Abstract:

**PURPOSE:** To make an area occupied by an electrode smaller so as to improve a solar cell in a photoelectric conversion efficiency by a method wherein two or more electrodes which collect currents of small domains arranged dispersedly on a photoreceptive face and a lead wire, provided to the outside of the photoreceptive face, which joins the current collected by the electrodes together are equipped.

**CONSTITUTION:** An n-type silicon semiconductor layer 2 is provided to one side of a p-type silicon semiconductor substrate 1 and an electrode metal layer 8 of silver or the like is provided to the whole other side of the substrate 1. Many thin electrodes 4, 4... are arranged on the surface of the n-type semiconductor layer 2 at a nearly equal interval between them, where the surface is made to serve as a photoreceptive face, and lead wires 9 and 9 are provided to the outside of the photoreceptive face and connected with the electrodes 4, 4... through connecting wires 5, 5.... A connecting point 10 of the connecting wire 5 with the elec-

trode 4 can be provided to the outside of the photoreceptive face or a part of the electrode 4 can be extended to connect it directly with the lead wire 9. By these processes, an electrode which joins the currents together collected by electrodes from many small domains does not need to be provided to a photoreceptive face, so that a light incident area can be increased and consequently a solar cell can be improved in a photoelectric conversion efficiency.

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